WTO

AN ECONOMIC RIGHTS PERSPECTIVE

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WTO: AN ECONOMIC RIGHTS PERSPECTIVE

In a world filled with themes and images of globalisation how does one engage with the more provincial question of national interest? Does the question of national intervention in the economy to safeguard its domestic interests" become ir-relevant in the era of globalisation? Should the state's intervention in the economy be completely substituted by the market as the only form for the allocation of goods and services? In this age of neo-liberalism, when nation-states all over the world under the tutelage of the International Monetary Fund (IMF), the World Bank (WB) and the World Trade Organisaton (WTO), are being forced to withdraw from their respective economies, is it incongruous to still talk of national economic interests.[1] I will argue here and present evidence to the effect that discussions of national interest are crucial for discussing the future of Indian business and economic strategies. I will make my point through investigating the impact of Intellectual Property Rights, an important new area of WTO, on the Indian seed and pharmaceutical industries.

Why is the question of India's "national interest" so important especially in its relation with the WTO? There are two reasons:

A) Firstly, because the WTO has, since its formation on January 1, 1995, suddenly emerged as the world's most powerful trading authority. It has been invested with quite extensive authority along with powers of sanction against erring nations; features that its earlier predecessor called GATT lacked.[2]

The rules of international trade have, for the very first time, been significantly altered with the creation of the WTO. There is now a new and clear set of "binding" rules for all its 135 participant members.

The stress is on "binding" because the final decision of the Dispute Resolution Board, a board whose task is to settle trade disputes between member countries,must be accepted by the disputants or they will face WTO endorsed sanctions. This is a very significant development as it dramatically increases the power of enforcement given to the WTO.

B) Secondly, because there is, at the core of the WTO, an "asymmetry" with respect to the trading interests of third world nations like India and first world nations like the United States. In other words the set of interests articulated by the third world countries are different from those of first world countries. The first world countries see the WTO chiefly as a vehicle for further enhancing and consolidating their global competitive edge. The third world countries, however, see the WTO more as a vehicle for helping to create rapid industrial development. They expect the WTO could facilitate favourable western investments and thus aid them in their efforts to succeed in their export-driven industrialisation.

This asymmetry of interests between the first and third worlds, a point on which I will further elaborate, has become the very bone of contention for future trade relations.

The Logic of Globalisation

WTO has become a vehicle par excellence of a western dominated globalisation. It has become the jaw and teeth of international trade. Along with its two sisters, the World Bank and the IMF, it cajoles, persuades and sometimes threatens its member countries into accepting the demands of a new form of market driven liberalism

(referred to as neo-liberalism) that is sweeping the world. The WTO, five years into its founding, has acquired epical significance and very ambitious intentions. It has a sum total of 15 separate areas of negotiations with 60 agreements in all. The trade areas are divided into 2 tracks: a (GNG) Group of Negotiation on Goods and (GNS) Group of Negotiation on Services. Some of the key subjects in the WTO include Agriculture, Sanitary and Phyto-Sanitary Measures, Textile and Clothing, Anti-Dumping Measures, Trade in Services, Trade in Goods, Trade Related Intellectual Property Rights, Trade Related Investment Measures, Dispute Settlement Understanding.

The WTO basically seeks to bind and unify the world under its trading banner. Such binding will lead to dramatic restructuring of old economic relations within nations and thus create considerable churning. The more rapid, that is, destructive or otherwise, is the pace of globalisation, the more troubling and unanswered are the questions. The symptoms of such angst and anxiety were clearly witnessed in the large-scale street protests leading up to the WTO trade talks at Seattle during November 1999. The continuation of such a situation could lead to greater despair in many countries of the world but also hopefully to deeper sustained
questioning of the present nature of the globalising system. This exercise is to encourage the questioning of the impact that WTO will have on India in the near future.

WTO AND INDIA: ASYMMETRY IN TRADE NEGOTIATIONS

For a third world country like India what therefore are the implications for joining the WTO? Some relevant questions to raise are a) what were the promises made to third world countries like India for joining the WTO? b)

Were these promises actually fulfilled? & c) Why has there not been a really extensive debate in India regarding the nature of our participation in the WTO, especially given that we must bind ourselves to all its agreements, even if they may have serious negative implications? The answers that we give to such questions are crucial for the future determination of our domestic business environment. These questions will be examined, as I have said earlier, through a careful analysis of the impact of WTO on India's pharmaceutical and seed industries. I have chosen these industries out of the many others because the changes they are undergoing clearly reflect the larger WTO inspired re-construction of the Indian economy.

More precisely, what will be the direct impact of WTO on India?

a) The inclusion for the first time of many new trade features such as Trade Related Intellectual Property Rights (TRIPS) (discussed later), Trade Related Investment Measures (TRIMS), new agricultural programs, a ruling on Textiles and Clothing and the Dispute Resolution Understanding will, whether we like it or not, have a definite transformative impact on Indian industries and India's trading relations with her major exporters who happen to be first world countries.

b) The last five years of WTO existence gives us a fairly good picture of the nature of asymmetry that exists with respect to the interests articulated by the first and third world countries. One notices a pattern of unilateral trade concessions made by India to the western countries, especially to US. Indian national interests are bargained away, with the first world barely offering any response to such gestures of accommodation.[3]

Let me next turn briefly to two instances of negotiations between India and the United States. These examples will serve to better illustrate the nature of asymmetries involved in the trading relations between first and third world countries.

a) The first example relates to the much debated issue of Intellectual Property Rights. At the start of the 8th round of GATT talks in 1986, United States introduced an altogether new trade agreement called Trade Related Intellectual Property Rights or TRIPS. For two years this attempt by the U.S. was strongly resisted by fifty third world countries including India and Brazil. Their fear was that the technology they need from the west for development would become even more expensive under the newly introduced "product patent" regime or TRIPS. Product patents can be perceived as a monopoly right vested in its holder, who thereby can influence the price and availability of the product.[4] What is surprising is that after all the initial opposition, in a sudden turnaround in 1988, most of the third world countries, including India, relented to the inclusion of IPR: a legislation that will single-handedly provide more power and leverage to first world knowledge driven industries.

Why did India change her position?

The third world countries agreed to the inclusion of IPR because the first world countries promised in return to change a quota based Multi-Fiber Agreement (MFA) in textile, an action that would clearly benefit the textile exporting countries like India. Very briefly stated the MFA was constituted by many textile-importing first world countries through a system of import quotas for each exporting country. This was done so as to protect the domestic first world markets from foreign competition.[5] The third world exporting countries wanted the complete

removal of these quotas, which US agreed to, in 1988, but has very slowly if reluctantly, acceded to.[6] MFA, which came into force in 1974, was allowed to lapse in 1994. **India expected that more than one-third of its WTO benefits to accrue from the new Agreement on Textiles and Clothing (ATC) that replaced the MFA.** No benefits have actually materialised so far. What little market access resulted from the implementation of ATC, has been cancelled out by measures taken by the importing countries to curtail imports such as transitional safeguards, anti-dumping actions and the discriminatory rules of origin.[7]

So what we see through this example is that while India is going to great lengths to redesign its Intellectual Property Rights with a new patent act already passed by the Indian parliament in accordance with the WTO stipulations, the Americans, on their part, have been reluctant in opening their textile sector in the accordance with the same rules.[8]

b) The second example of asymmetry is with respect to the issue of Quantitative Restrictions or QRs. QRs are basically non-tariff barriers, restricting the volume of goods traded between two countries. Under the WTO stipulation non-tariff barriers must steadily give way to tariff barriers (customs duty, for e.g.) which itself must be steadily reduced over the years. Moreover under special circumstances, countries like India with a balance of payment problem were entitled to maintain QRs till a suitable period as decided by WTO ruling.

India had chosen to retain QRs on 1,429 items. According to India's original WTO commitments the QRs on these 1,429 items were to be phased out in three stages by the

nd of March 2003. These 1,429 items – a wide range of onsumer goods and manufactured products – happen to e those that the US exporters have been longing to troduce into the Indian market. US did not agree with dia's claim that it had a B.O.P problem and hence took e case before the Dispute Resolution Board of the WTO here India recently lost the case. The net result is that dia has to phase out all QRs by April 2001, an advance 2 years from the earlier committed timeframe.

eginning April 1, 2000, US exporters would be able to ood the Indian market with consumer products such as ulbs, tuberous roots, onions, apples, rice in husk, potato arch, milk, crisp biscuits, gingerbread, rusks, soups, oths, etc, at a very nominal import duty.[9] The fault here oes seem to lie with the Indian government in not egotiating harder, as European Union and Japan were ven more time by the US for reducing their QRs. India ed not have conceded two complete years, especially hen its other commitments to the WTO have been quite gularly met. My point, however, is not so much that it tually did concede to US pressure but that there was rely any effort or pressure from the Indian government making the Americans concede on trade issues of portance to India.

r example, India would really benefit if the Americans duced their agricultural subsidies. The U.S. demanded waiver in 1995, allowing it to impose import controls to otect its agriculture in the name of maintaining food f-sufficiency. This waiver has been fragrantly abused the U.S. and later by the EU countries to build huge cks through liberal subsidies, and then dump these o world markets, again through the help of export bsidies, undermining in the process traditional food

producers in developing countries. It is these subsidies and not efficient production, which enabled US to emerge as the world's largest cereal supplier.[10]

Annual subsidies of agriculture (1997) in the first world amounted to $150 billion, in the third world it amounted to $19 billion. More specifically, compared with the equivalent of $1 billion that India gives its 600 million agriculturists, the U.S. Government provided farm subsidy to the tune of $32 billion to a very small farming community while the corresponding figures for western Europe and Japan were $53 billion and $33 billion.

So what one can observe again is that India's compliance with the WTO rulings based on the objections made by US appear to be rather unilateral without getting the latter to make meaningful trade concessions.

One can perhaps conclude with the help of the above two examples that the economic rights of India are being steadily bargained away to first world countries under the willful insistence and without much resistance on the part of the Indian state representatives. The point however to be made is that our weak negotiating strength merely compounds a deeper problem of a structural inequality between the first and third worlds. Our dependence on the first world for most of the investments and technology renders our positions palpably weaker.

THE POLITICAL ECONOMY OF INTELLECTUAL PROPERTY RIGHTS

With the above understanding of India's negotiating abilities let me focus with greater concentration on the Political Economy of Intellectual Property Rights. This will

give us a much better insight in evaluating our business strategies with respect to international trade.

Trade Related Intellectual Property Rights or IPR, as I have already emphasised, was specifically introduced during the 8th round of GATT talks at the insistence of United States over and against the objections of many third world countries.This particular insistence by the US needs brief examination only so as to better illustrate what India is up against.

Introduction of IPR in WTO by the US

The stakes for the US for wanting IPR included in WTO are very high. The reasons have to do with the dramatic transformation in the first world economy beginning in the early 1970s, which paved the way for the stress on services and eventually on IPR by these countries. There are four very obvious reasons that have contributed to the changed global political economy. Very briefly these were:

a) High labor costs in the OECD countries (Organisation for Economic Cooperation and Development – a group of western industrialised countries) by the early 1970s led to the relocation of labor intensive industries to the third world. This was an active strategy adopted by first world TNCs. Labor was obviously much cheaper, sometimes by as much as 80%, and labor and environmental laws were not strictly enforced in many third world countries. This saw the beginning of transition from a manufacturing based economy of the first world to a service based economy dominated by knowledge intensive
industries.

b) On the Third world side the indebtedness of the 1970s (because of the twin oil crisis of 1973 and

1979) led to the increasing role of IMF as guarantor of loans and increasing demand for foreign investments and thus a more prominent role of Trans National Banks and Trans National Corporations. So an increasingly favorable neo-liberal climate was being created all over the world for the migration of capital from OECD countries to third world countries. Such a developmentrather neatly converged with global trends.[11]

c) The end of the 1980s gave way to the end of cold war, which definitely gave greater ideological leverage to the western world. This helped western countries in all sorts of arenas but perhaps the most in trade and investment talks such as the WTO.

d) Finally one should add that since the 1970s the west has been plagued by rather average or low rates of growth. One way to improve on their domestic situation was to find markets in third world countries for the commodities produced at home.[12]

To stress the point, located within the many structural changes that I have just mentioned, the Western countries led by US began to lay much greater stress on consolidating their gains in the service sector, especially in the so called knowledge industry. We know that the knowledge intensity of production is greater in the service sector. It is because of such high stakes in the knowledge industry that the introduction of IPR acquires prominence.

Some examples of the knowledge industry would be software, creation of entertainment products like movies, CDs and audios and bio-technology.[13] The knowledge sector is a fast-growing area of the global economy: between 1980 and 1994 the share of high-technology products in international trade doubled, from 12% to 24%

The clear edge western countries enjoy in manufacturing knowledge-based products is reflected in the fact that they hold 97% of all patents worldwide.[14] In 1993 just 10 first world countries accounted for 84% of global research and development, controlled 95% of the US patents of the past two decades and captured more than 90% of cross-border royalties and licensing fees. 70% of global royalty and licensing fee payments were between patent and affiliate in multinational corporations. By contrast, the use of intellectual property rights is alien to many developing countries. More than 80% of the patents that have been granted in developing countries belong to residents of industrial countries.

Knowledge is thus a very crucial attribute of the new process of globalisation. One also needs to make explicit the fact that there is a great deal of unevenness worldwide in the access to knowledge or information. In 1990, for instance, it was estimated that 90% of data on Africa were stored and managed in the US and Europe, inaccessible to African policymakers and academics.[15]
So clearly a lot is riding in favour of western countries vis-a-vis the knowledge based service economy. By emphasizing the need to include IPR in the 8th GATT round, western countries in general and US in particular wanted to ensure a strong patent regime, one that would prevent as much as possible the enormous losses they claim they were making through the sale of pirated products.

Product versus Process Patent

The significance of product patents can be better understood if placed in comparison with process patents. The basic thrust of IPR is to emphasise product patents as opposed to process patents that existed in India till recently. Process patents are more flexible as they allow for patenting the multiple ways of arriving at a particular end product while a strong product patent regime focuses

more narrowly on the end product and discourages the practice of process patents.[16]

Privatisation of Knowledge

Product patents paves the way for monopolisation and thus helps to maximise the extraction of profits.[17] The urgency for this thrust can be even better understood when one realises that knowledge creation in the west has increasingly in the last few decades become a private corporate affair as opposed to its public availability before. With many large multinationals like Monsanto, Duprat Cargill entering the fields of bio-technology, what we are seeing is that innovations are largely carried out in corporate laboratories. With the privatisation of the innovation process, the corporate entities have also begun to demand that they be paid in terms of patents and copyrights for the millions of dollars they have spent in creating the products.[18]

With the above background on the growing importance of intellectual property rights, I will next concretize India's relation to WTO by specifically examining the pharmaceutical and the seed industries.

ROLE OF IPR IN INDIAN SEED INDUSTRY

How does the issue of Intellectual Property Rights pla itself out with respect to the Indian seed industry?

There are three central issues involved here: a) that ensuring increase in productivity; b) that of maintainin control over the seed industry since it is such a vita component of our national food security and c) that ensuring bio-diversity as essential for retaining th vibrancy of Indian agriculture. The importance of thes elements will become clear during my elaboration.

et us first take a look at the structure of the seed industry nd the factors that dominate it.

here is an acceptance, if grudging at times, among some f the previous ardent supporters of the green revolution nat it has run out of steam and that the ecological costs ave been fairly high. If one remembers, the first green evolution beginning in the late 60s was based on the use f new HYV or more adequately HRV or High Response ariety seeds. It is estimated that just the foreign exchange omponent of the Green Revolution strategy, over the five-ear plan period (1966-71) was projected to be about S$2.8 billion at the then official rate. This was almost ix times the total amount allocated to agriculture during ne preceding third plan. Most of the foreign exchange as needed for the import of fertilisers, seeds and esticides, the new inputs in a chemically intensive trategy.

he chemically intensive strategy of the first green evolution has produced some ecologically dis-heartening esults. There are parts of Punjab, Haryana and other egions in India where huge areas of land have become ater logged or simply uncultivable because of the amount chemicals used.[19]

o the alternative being suggested is to inaugurate the econd green revolution. This will require genetically tered or transgenic seeds that are much higher yielding nd will require less chemical fertilisers.

ne stakes for the Indian seed industry are very high. The eed industry in India is growing rapidly. It is expected to e Rs. 2000 crore in the year 2000 and about Rs. 6000 ore in the year 2005. Indian farmers require sixty lakh nnes of seed every year, a figure that is likely to crease.[20] Globally speaking, the value of the retail seeds

business is expected at present to be around US $28 billion.[21] The point of contention here is basically "who will be able to exercise control over a vital area of food production in India: whether it will be in the hands of traditional farmers or the trans-nationals engaged in selling genetically altered seeds.

Traditionally in Indian farming, seeds have been informally exchanged between farmers and 90% of the seeds of the previous harvest are used again. This kind of informal set up obviously prevents seed corporations from making sizeable profit through selling their own seeds. So there is a great deal of effort by Transnational Corporations to introduce the idea of patents and press for the recovery of dues from farmers and prevent them from making informal sales. At one extreme end of such efforts is the creation of Terminator seeds – by companies like Monsanto – which will have only one harvest life.

The pressure for the privatisation of the seed industry has increased greatly after the 1988 New Seed Policy which liberalised seed imports and encouraged foreign investment in the seed sector and the 1991 policy of relaxation of equity limitations for control by foreign companies.

At present, large private seed companies in India, including Transnationals, control 40% of the sale of seeds while the public sector constitutes only 30% of the sale. The public sector, largely made up of 13 state seed corporations subsidizes the sale of high quality seeds to poor farmers. Ironically the state seed corporations or the SSCs also end up buying HRV seeds from the private sector to sell to the farmers. Basically therefore the private seed corporations, small or large, are increasingly taking control of the seed business.[22]

ne important point here is that the large private rporations are increasingly going in for HRV seeds that re more commercially exploitable and more popular ecause of their increased yield. HRV seeds already ccount for 75% of the market share.[23] It is these HRV eeds that are increasingly becoming subject to genetic anipulation by TNCs. In crops such as maize, sorghum, nflower and soya, the TNCs are already at an advantage. f the 4 largest suppliers of sunflower seed, 3 are TNCs ith Cargill being the most prominent. Mahyco, an Indian mpany has lost 75% market share in sunflower seed nce 1988 from a high of 85%.[24]

ssociated with the developments in the seed industry is e fact that 27 TNCs are researching on all major crops develop adaptability in them to particular brand of emicals.[25] The world seeds business, especially the ansgenic variety is thus increasingly likely to get ncentrated in the hands of a few powerful TNCs who cidentally also dominate the global chemical, herbicide d pesticide market.[26]

ne high cost of patented agriculture inputs like bio-rtilizers, bio-pesticides and most of all genetically gineered seeds will turn agriculture into a capital-tensive industry and thus severely constraint the small d marginal farmers. The introduction of IPR into the ed industry is thus raising some very serious questions th respect to the growth and control of the Indian seed dustry, the role of small farmers and the overall input sts. These issues, I want to argue, must become ominent concerns for formulating future economic rategies.

o-diversity

nother significant feature of the concentration of seed siness in the hands of private, especially large

transnational corporations, is that the bio-diversity in terms of various kinds of seeds produced by local farmers is rapidly disappearing. For instance, 50 years back, Indian farmers grew over 30,000 different indigenous varieties of land races of rice. The situation has radically changed. In another 15 years this enormous diversity will be reduced to no more than 50 varieties, with the top ten accounting for over 75% of the sub-continent's rice acreage.

Principally what is at stake is the possibility that in the not too distant future, the supply of our seeds for most important crops will be in the hands of TNCs. With their transgenic or HRV seeds, indigenous bio-diversity will rapidly diminish making the Indian farmers increasingly dependent on international companies for their seeds.

What has been the Indian government's response to the pressure from the west, especially the US, to enact a strong patent regime with respect to seed varieties?[27]

A Plant Variety Protection and Farmer's Rights Bill was presented to Parliament in December 1999 and is awaiting a final decision. The response of many commentators so far has been rather critical of the bill. The bill apparently seeks to give greater protection to the plant breeder's rights of the developed countries. In fact the Bill, it is claimed has been modeled after a agreement articulated by a European/American forum called UPOV 1991 or the Union for the Protection of New Plant Varieties. UPOV seeks to "effectively extend the rights of plant breeders to all harvests derived from original seeds". So farmers will be divested of their rights to exchange seed or even save seeds for their own use. The Indian bill has not adequately addressed this question from the farmer's perspective. The Bill also does not provide for prior consent from farmers or compulsorily benefit-sharing arrangements when farmers' varieties and knowledge are used.

riefly therefore, what can we say is the likely impact of nforcing a strong IPR regime on the Indian seed industry?

- That the economic control over the seed industry will slowly but inevitably move into the hands of formal networks of large corporations, especially the transnational ones, and away from the informal networks of Indian farmers.
- That the seed bio-diversity in India, already diminished, would deplete further and perhaps ir-reversibly.
- Growth in Indian agro-exports could be negatively effected by rising input costs as seeds and agri-chemicals become expensive due to enforcement of the IPR.
- One must also state that for a question as sensitive as the food security of the nation, the Indian government appears to be displaying a rather indifferent role.

nus instead of encouraging investments by the public ector in research for better techniques of soil and water anagement, rainfed agriculture, cropping systems, nvironmental impact and long term sustainability, we e just going along with a stress on genetic re-engineering seeds for improvement in yield production.[29]

OLE OF IPR IN PHARMACEUTICAL INDUSTRY

ne impact of IPR in the Indian Pharmaceuticals industry n be viewed with respect to two separate areas: a) staining the present growth of the pharmaceutical dustry and b) the possible impact on the industry via tenting of Indian tropical bio-diversity.

nat is the direct impact on the pharmaceutical industry? e growth in the pharmaceutical industry of India is close Rs. 15,000 crores per annum.[30] It ranks among the ost developed in the Third world, in terms of technology, ality and range of medicines manufactured.[31] From

simple headache pills to sophisticated antibiotics and complex cardiac compounds, almost every type of medicine is now made in India.

India has made some significant strides in terms of self-reliance for pharmaceutical products. From being an importer of medicines in the first few decades after independence, we are today able to meet a good part of our essential requirement through indigenous production. Around 65-70% of the bulk drugs are manufactured in the country. New drugs introduced in the world markets are produced locally at affordable prices within 3-4 years of their introduction. Prices of drugs, once among the highest, are today the lowest in the world. Because of the cheap prices we are also able to export over Rs. 4000 crores worth of drugs (1996-1997), a tremendous increase from the 1.3 crores that we exported in 1963-64.[32]

There are two reasons why Indian drug prices are low compared to other parts of the world. One is that we have a government organization called the Drug Price Control Order or the DPCO. Under the DPCO, prices of all bulk drugs and over 60,000 formulations were controlled so as to make drugs easily available to the common man or woman.

The second reason for inexpensive drug prices is because many Indian companies have engaged in what is called reverse chemical engineering, a process that has been used even by developed countries during the infant period of their industrial growth.

Reverse engineering was allowed and encouraged under the previous process patents. Process patents allowed one to chemically analyze new drugs from abroad and reproduce it under different conditions. The process patents only covered the processes and not the product and were allowed for a short period of seven years. The

conditions were rather favourable and in fact by 1995, Indian companies were steadily winning out over MNCs in the drug business.[33]

It is therefore a significant fact that part of the dramatic growth of the Indian pharmaceutical industry has been undeniably due to the protective environment afforded by the 1970 Process Patent Act and to some extent due to restrictive legislations like FERA, MRTP and other industrial policies.[34]

Given the impact of IPR what is the major issue facing the domestic industry? At the present juncture the major issues facing the domestic industry is that of investing in research and development so as to be able to compete with international corporations in creating new drugs.[35] The industry's expenditure in R & D is currently at two percent. Hence one may take Rs. 300 crores as the total expenditure of all Indian pharma companies for their R&D efforts. This is considerably less than the 6-8% spent by many corporations in the western world.[36] Another important consideration with respect to R&D is the high cost of new drug development, estimated to be around $250-300 million.[37] Although, in the Indian context, this expenditure might be only one third or one fourth because of the low cost of qualified man-power.[38]

The gestation period for any return on investment is also rather long. It takes 8 to 10 years for its production and approval. Few Indian companies can afford to spend in excess of Rs. 100 crores and wait for a decade for pay back. It is clear that the basic research programme demands a high "entry fee", which only companies with very deep pockets, large business volumes, and an extensive global operation are positioned to accept.[39]

Given such high costs transnational pharmaceutical corporations claim that the development of new drugs is

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very expensive. The U.S. specifically claims that it loses annually $1.4 billion from the sale of copied drugs in just four third world countries including India — which has a $0.92 billion share of the copying.

If one were to pause here for a minute, there definitely appears to be a grain of truth in the criticism of countries like the U.S. against developing countries like India.
The larger point, however, is whether the issue of tremendous R&D cost born by TNC's is "the" decisive factor that legitimises the imposition of the IPR regime. Perhaps not as there clearly appear to be other important issues to take into account:

a) First world countries have introduced product patents rather recently when their own pharmaceutical industries became strong enough to challenge international competition. For example, France adopted product patents in 1958, West Germany in 1968, Japan in 1976, Italy in 1978, Switzerland (home of many pharma companies) in 1997.[40]
b) A 1990 US Senate report found that most new drugs introduced in the US market over the 1980s were very marginal improvements over the already available ones.
c) Another US study maintains that most of the new drugs have offered little therapeutic advantage over pre-existing competitors along with the fact that brand loyalty has allowed a drug to have value well beyond the patent life.

One thus realises that the imposition of a strong IPR regime is more an attempt by western countries and their pharmaceutical corporations to consolidate the gains they have made in the last several decades. One can even add that just when Indian pharma companies were acquiring strength under the process patent regime they are being forced to concede the gains to transnationals. This need

not mean that the Indian sector should endlessly be provided a completely secure environment, rather there should be a time frame arrived after a thorough debate and due consultations from within the industry. At presently our timeframes are dictated by the external environment and therefore does not do justice to our internal concerns.

What then are the changes that would effect the pharmaceutical industry under the impact of the IPR regime?

a. Increased royalties and patent fees would have to be paid to MNC patent holders. There is a prediction that about $10 billion per year royalty revenue will be earned by the MNCs of the west.
b. Our drug prices will become expensive, perhaps not immediately but certainly over the next decade when new drugs with new patents come into the market. We can also anticipate a decrease in the subsidies given by DPCO due to pressures from IMF.[41]
c. Export of drugs from India would receive a major blow.
d. MNCs will not have to abide by local country requirements. They can import all their drugs from outside thus increasing our imports.
e. It is expected that about 40-45 MNCs will control the health care areas world wide in 10-15 years. Their share of the Indian drug market will go up from 25- 30% to 70% in 15-20 years.[42]

There will be a reduction in transnational corporate interests in addressing diseases like Malaria, Tuberculosis and Sleeping Sickness in Africa.[43] The impact on public health will be felt even more acutely with governments reducing their healthcare budgets.[44] The allocation by the Indian government on healthcare as a %age of total plan outlay has declined from a mere 3.3% in the first plan to 1.7% in the 8th plan.

Strategic Response to Pharma Industry

Based on the above industry analysis one can make certain suggestions for a strategic view of the Indian pharma industry: [45] With the support of the Indian state, the industry must begin to invest seriously in basic research, new product launches, a thrust into global generics market and licensing-in of products from companies that do not have a presence in India. The strengths of the Indian companies lie in the development of low cost bulk drugs and formulations through low cost R&D for new drug discovery as well as clinical studies for the worldwide markets. The possibility of licensing of patented products and R&D collaboration can also be explored. [46]

More specific suggestions include: [47] a) The need for rapid development of innovative, non infringing processes for products going off-patent internationally, with a focus on block-buster products involving difficult chemistry and b) Leveraging the low cost domestic manufacturing, manpower and raw material base to achieve a consistent global competitive advantage through price leadership.

Such strategies, however, will not ameliorate the poorer Indian consumers from the effects of an anticipated higher pricing. It is these gaps in Indian policy making that provide us with clear illustration of how lightly are issues of economic rights perspective taken.

Patenting tropical bio-diversity

There is one potential area however where India can minimally benefit with a strong IPR. With her vast tropical bio-diversity she can reap some advantages with the new patent regime if she plays her cards well.

With the attempt by western actors at patenting neem turmeric, phyllanthus niruri or Jar Amla for hepatitis

jamun, brinjal and certain aspects of the basmati rice, Indian policy makers and thinkers have suddenly become aware of the lurking danger and woken up to the advantages of patenting our bio-diversity.[48]

Bio-diversity is of great importance to drug development, and developing countries, especially countries like India and Brazil, are the source of an estimated 90% of the world's store of biological resources. More than half of the world's most frequently prescribed drugs are derived from plants or synthetic copies of plant chemicals — and this trend is growing.

So can India leverage its bio-diversity in the context of IPR? It has been calculated that even if just a 2% royalty were charged on genetic resources developed by local innovators in the tropical countries of the South, the North would owe more than $300 million/yr. in unpaid royalties for farmers' crops seeds and about $5 billion/yr. in unpaid royalties for medicinal plants.[49] So India, along with other developing countries can certainly aggressively start demanding royalties for the use of their plants, crops and seeds.[50]

As I mentioned before the Indian government seems to have rather belatedly woken up to the issue of protecting Indian bio-diversity.[51] India has taken the right cues from an international Convention on Biological Diversity, more popularly known as CBD. The CBD which came into force in 1993 stipulates that "prior informed consent" is required if a country or corporation wants biological resources from another country.[52]

The Indian Biological Diversity Bill has thus incorporated articles that prohibit the transfer of Indian genetic material outside the country without the due process of approval by the government. There are many other features in the

Bill that will give some control to local communities regarding the source from where the "biological" material can be taken.[53] All in all, the Bill appears to empower the community, whether locally or nationally, in having control over its biological diversity. [54]

This is perhaps a good start in recognising and appropriating the advantages that the country can receive under the new IPR regime.[55]

CONCLUSIONS

Through her participation in the WTO, India has definitely launched herself into the neo-liberal dimensions of international trade. Whether India is indeed benefiting from such an arrangement is, however, rather doubtful. The Indian state makes repeated unilateral gestures of accommodation with WTO stipulations either voluntarily or under threat of sanctions by first world countries. My argument is that such gestures will remain futile if first world countries not in any way reciprocate them.[56]

The important theoretical question that must be raised is whether through our embracing of neo-liberalism as defined by institutions like WTO, IMF, WB, are we basically sacrificing our economic self-sufficiency in many industries, even if imperfectly expressed, in favour of a global efficiency mandated by global corporations, where the benefits will not necessarily accrue to the Indian populace.[57] In other words, the important question for me is in whose favour is such global efficiency. The answer to this question cannot rest on easy generalisations, rather it requires a sustained industry by industry inquiry regarding the potential impact of the WTO regime.

Our relation with the WTO is in double jeopardy. First, as I have argued at the very beginning, our trade relations with the first world countries, vis-à-vis the WTO, ar

governed by a deep asymmetric framework. Their trading interests are one of consolidating earlier gains while our interests are more of seeking development support for the purposes of industrialisation. On top of this asymmetry the Indian government rather easily concedes to the interests of first world countries. This compounding of problems spells a rather weak and unhappy situation for India. Such a situation has, as I have shown, a direct impact on the exercising of economic rights by the vast majority of Indians. We ought to be questioning the very foundation of the asymmetries and inequalities embedded in the rules of the World Trade Organisation.

Such questioning can only come by dramatically increasing the popular level of debate and discussion about WTO's present and future. This will at least ensure that the contradictions or inconsistencies in either our posi tion or the position of first world countries are understood, creating a more grounded and self-sustaining position that does not give in easily to concessions.

The present document is an effort to directly contribute to such questioning of undemocratic structures of international trade.

NOTES

[1] Neo-liberalism basically spells the end of the liberal welfare age that came into existence after the great depression of 1929. It is the new era of the withdrawal of nation-states from intervening in their respective economies and the greater role of the market in allocating resources.

[2] Countries of the world have been engaging in trade talks called the GATT rounds (General Agreements on Trade and Tariffs) since 1947. After the 8th round of GATT talks concluded in 1993 (1986-1993), there was a desire to give a more binding structure to international trade negotiations. This idea gave birth to the World Trade Organisation as a body that inherited the agreements made during the 8th Uruguay round with legal foundations for its 135 members.

[3] Here is a small flavor of how seriously the Indian government itself takes the negotiating process. In the recent scuttled WTO talks at Seattle (November, 1999) the Indian delegation was led by strength of only 40 people with barely any patent lawyer of repute. The US delegation, on the other hand, had strength of 1000, composed of three tiers of experts: the ministers at the front, the lobbyists in the second layer and the researchers at the third tier. The idea was to have an almost foolproof system of obtaining the right information and using such information by the lobbyists to counter any anti-American positions or acquire greater negotiating leverage with other countries. In a miniscule way, the preparation of the Americans and the Indians shows the motivation of the countries with respect to wanting to succeed in the WTO.

[4] The basic thrust of IPR is to emphasise product patents as opposed to process patents that existed in India till recently. Patents are supposed to satisfy three criteria of: a) Novelty – innovation must be new, cannot be part of 'prior art' or existing knowledge, b) Non-obviousness – implies that someone familiar in the art should not be able to achieve the same step and c) Utility.

[5] In the last year of its existence, the MFA had 44 participants, six of whom (Canada, Norway, the United States, the EC, plus Austria and Finland) applied restraints. Such restraints were used almost exclusively to protect their market against import of textiles and clothing from developing countries and, to a lesser extent, from former state-trading countries, also MFA members. See Arun Goyal, (ed.) WTO in the new Millenium, (Academy

usiness Studies, New Delhi: 2000, 4th edition), p. 270.

The integration will take place in four stages: at the rate of 16%, 17%, % and 49% finally on 1.1.2005. The major importing countries like the SA and EU have mostly integrated such products on which there were no otas restriction in any case during the first two stages. Therefore, effective ase-out quotas has been minimal in the two stages till 1.1.98. In the third ge till 1.1.2002 also the trend is likely to be the same. This will mean that ost of the quotas may continue upto 31.12.2004. See ibid., p. 272

These are some defensive mechanisms allowed by the WTO to its nstituent members to prevent the abuse of exports and to safeguard their mestic industries.

What is really ironical is that when such contradictions are pointed out to r government officials, they either wring their hands in sheer despair and ggest that India is obligated to follow WTO rules and regulations having gned onto the dotted line, however unfavorable may such rules be or they e their ingenuity to suggest how such new trade deals will prove to be of eat advantage for the future development of Indian industries.

Arundhuti Roy Choudhary, "QR removal and its probable implications", onomic and Political Weekly, April 15, 2000, p. 1356.

For instance, the OECD countries (taking the European Community, or C., the U.S. and others together) account for 80 per cent of the world eal trade; more than 55 per cent of these cereals are sold to less developed untries. The total subsidy given annually by OECD countries to their icultural producers reached a staggering figure of $240 billion. One OECD dy in the early 1990s estimated production subsidy equivalents (in rcentage of producer prices) in 1991 at 66 per cent for Japan, 49 per cent the countries of the E.C., and 30 per cent for the U.S. There cannot be slightest doubt that if such subsidies and import controls were withdrawn the E.C. and the U.S., the direction of trade would radically change ernight.

IMF plays a role in over 182 countries. Third World Debt is over $1.5 lion.

Excess capacity and lack of adequate global demand are problems facing first world. For example in the case of automobiles, the global capacity is 80 million units and 80% of capacity should be sold for the industry to ain profitable, which amounts to 64 million cars. However only 60 million s are being sold every year, hence creating a loss.

[13] For the sake of emphasis, one should add that for the US the categor that contributes its highest export earnings is entertainment products. Th category has overtaken the export earnings for its defense products and th is saying a lot.

[14] The top 5 bio-technology firms based in U.S. and Europe control mo than 95% of gene transfer patents. In 1995 more than half of global royalti and licensing fees were paid to the United States, mostly from Japan, th United Kingdom, France, Germany and the Netherlands.

[15] A US medical library subscribes to around 5,000 journals, but the Nairo University Medical School Library, long regarded as a flagship centre East Africa, now receives just 20 journals, compared with 300 a deca ago.

[16] Process patents in India were enacted in 1970. The total number of filin in India is extremely low though there is a gradual increase since 1994. most developed countries the average number of filings will exceed 1,0 per year. Japan stands out with over 300,000 patent filings every year. Als approximately 80% of the patents filed in India are by foreigners. The numb of patents in force (i.e., actually active and valid) has been spiraling dow from approximately 30,000 in 1970 to 10,000 in 1996. This indicates tha large number of patents are not being kept in force by payment of the yea fee. It appears that by scanning the patents granted in India to various firm from 1972-1994, we find that the major players in the patenting scene India have been transnational companies. 32 million patents are publish worldwide, growing at the rate of more than half-a-million new applicatio per year. See Prabuddha Ganguli, Gearing up for patents: The Indian Scenar (Universities Press, Hyderabad: 1998), p. 21, 25 & 101.

[17] As a reflection of the rapid growth of the knowledge industry, the p two decades have seen a huge rise in patent claims. The World Intellect Property Organization's Patent Cooperation Treaty accepts a sing international application valid in many countries. The number of applicatio made annually soared from less than 3,000 in 1979 to more than 54,000 1997.

[18] The trend towards privatisation has been particularly strong in agricult and biotechnology. In the early 1980s most crop and seed developmen the United States was under public research. Patents were rarely sought a rarely enforced; saving and trading of seed was commonplace. This chang when new legislation encouraged closer cooperation withthe private sec

nabling companies to profit from products developed largely with public unds. The intellectual property of public and university research was ncreasingly passed over to private industry: the portion of public sector atents in biotechnology sold under exclusive license to the private sector ose from just 6% in 1981 to more than 40% by 1990.One particular area vhere there is a strong desire for protecting Intellectual Property is in software nd music video piracy. Especially in software, there is a very fast pace of iffusion that is very easy to imitate. Software piracy is widespread in most f so-called third world countries — almost 90 to 100%. Even in the United States 40% of the software is illegally copied.

[19] See Vandana Shiva, The Violence of the Green Revolution: Third World Agriculture, Ecology and Politics (Zed Books, London, 1991). See also Sukhpal Singh, "Crisis in Punjab Agriculture", Economic and Political Weekly, June 3, 2000.

[20] Suman Sahai, "Farmer's rights and food security", Economic and Political Weekly, March 11, 2000, p. 879.

[21] See Vandana Shiva, et al, The Enclosure and the recovery of commons (Research Foundation for Science, Technology and Ecology, New Delhi, 997), p. 43.

[22] There are a total of 147 private sector seed companies in India.

[23] By and large, seed is produced under contract to small farmers. MNCs ay a much higher price to farmers than do smaller companies.

[24] Monsanto, over the past several years, has spent over $2 billion to acquire iotechnology assets needed for its worldwide production and marketing trategy. It has also acquired Cargill's Seed Business outside the US and 6% of the India's biggest seed company Mahyco. See Joseph Thomas, "A evolution in the making", in The Hindu Survey of Indian ndustry, 1999, p. 406-407.

[25] For instance, Soya beans have been made resistant to Ciba-Geigy's erbicide and this has increased the annual sales of the herbicide by $120 nillion.

[26] Only 10 pesticide manufacturers, all from the U.S., control 75% of the lobal market.

[27] The United States, exporting $50 billion of agricultural products a year nd planting transgenic varieties for 25-45% of its major crops, claims that trict safety rules will impede billions of dollars of global exports annually in eed, grains and even products like breakfast cereals and cotton clothing. But consumer movements and farmers have often reacted strongly to ransgenic crops, pulling them out of fields and rejecting them in shops. Ten

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years ago the risk of humans being infected by bovine spongiform encephalopathy (BSE, or mad cow disease) was said to be negligible — but it happened. A vigorous reaction against genetically modified crops has been observed in Europe, which has caused a setback to the plans of many American transnationals like Monsanto. For a positive note on the genetically modified technology involving the creation of Vitamin-A enriched Golden rice, see Suman Sahai, "The Story of Golden Rice", in The Hindu, June 28, 2000.

[28] "Gene campaign which has consistently opposed India joining UPOV had along with the Centre for Environment and Development, prepared an alternative to UPOV called the Convention of Farmers and Breeders (CoFaB). This is being discussed by developing countries as an alternative to UPOV". Also, the author claims, "what the farmer cannot do according to the new law, is sell seed". There is however some ambiguity on how strongly the law states this assumption. See Suman Sahai, "Agenda for Seattle", Economic and Political Weekly, November 20, 1999. See also Rajeev Dhavan, "The Right to Seed", The Hindu, May 05, 2000.

[29] "Given that the performance of new varieties, and therefore their sales prospects, depend crucially on improvements in these spheres, private sector should be interested in them. But techniques in these areas are not marketable products; moreover the effective application of these techniques involves complex problems of adapting and creating new institutions for managing common pool resources (soil and water management)." in A Vaidyanathan, "India's Agricultural Development Policy", Economic and Political Weekly, May 13, 2000, p. 1739.

[30] The capital investment increased to Rs. 1,380 crores in 1995-96 from Rs. 140 crores in 1965-66. The turnover has grown during the same period from Rs. 150 crores to Rs. 9125 crores. The industry is a net foreign exchange earner. The share of Indian pharma business in the world market is only 1%, although Indian has 16% of the world's population. By 2000 AD it is targeted that production of pharmaceuticals should reach Rs. 16,000 crores for domestic consumption and Rs. 5000 crores for export making a total of Rs. 21,000 crores. In D. Bhadury, "New vistas open up", in The Hindu survey of Indian Industry 1997, p. 216.

[31] The production value formulations has increased from Rs. 10 crores to Rs. 8,000 crores in 1994-95 and Rs. 10,000 crores in 1995-1996 and of bulk drugs from Rs. 18 crores in 1965-66 to over Rs. 1,520 crores in 1994-95. The number of licensed units has risen 14 fold to about 24,000 while more than 2.86 million persons are employed directly or indirectly. See Special

orrespondent, "Gearing up for the 21st century", The Hindu survey of Indian dustry 1997, p. 221.

Special Correspondent, "Gearing up for the 21st century", The Hindu rvey of Indian Industry 1997, p. 221.

Some Leading Indian companies are: Ranbaxy, Cipla, Wockhardt, Orchid, r. Reddy's, Sun Pharma. Some MNCs operating in India: E Merck, urroughs Wellcome, Fulford, Pfizer, SmithKlineBeecham, Parke-Davis.

There is an excellent discussion paper by Jean O. Lanjouw of Yale niversity, titled "The Introduction of Pharmaceutical Product Patents in India: eartless Exploitation of the poor and suffering"?, Discussion Paper No. 75, Economic Growth Center, Yale University, August 1997. The articles an be accessed at the Yale University's Economic Growth Center website. he discusses in great detail the overall impact likely to felt on the Indian dustry.

Companies like Dr. Reddy's Lab, Cipla, Orchid have already begun to ake sizeable investments in R&D. The international competition is strong. oon people will be talking about only "one" pharmaceutical industry - one at gets fundamental research done in a particular country, process evelopment in another, bulk manufacturing in a third and formulation of the nal dosage form in a fourth country. Yet, the end product could have one bel with one drug name and one company name.

The pharmaceutical industry invests $27 billion a year in research, but ost of that is a hunt for drugs to lengthen or brighten the lives of consumers ho are already relatively healthy. Among the biggest sellers are drugs to ow hair, relieve impotence or fight cholesterol, ulcers, depressions, anxiety, lergies, arthritis and high blood pressure. See Donald G. McNeil Jr., "The edicine Merchants: Drug Companies and the Third World" in The Frontline, ne 23, 2000.

This level of investment can be contrasted with a US based major harmaceutical company such as Merck which spends more than $1 billion Rs. 4200 crores).

P. Ramanujam, "The Millenium Angst", in The Hindu Survey of Indian dustry, 1999, p. 272

While it has been argued, perhaps rightly that the cost of basic research in dia would be one-fifth to one-seventh of the cost of a similar activity in estern countries, the fact remains that the magnitude of investments required ill daunt and stretch even the most profitable Indian pharma corporations. ee D. B. Gupta, "Global Opportunities Beckon", in The Hindu Survey of dian Industry, 1997, p. 219.

[40] Arguments are made in support of stronger patent laws. For instance, it claimed that the share of the market of Italian pharmaceutical compani increased from 36% to 42%. R&D investment increased from 6.5% to 11 of turnover. Japan introduced product patents in 1976. Over a 15 year perio 1975-1990, R&D spending increased from 6 to 10.8% of sales. Similar foreign investments in China (1993) and Brazil increased tremendously aft introduction of new patent laws or IPR, in D. Bhadury, "New vistas ope up", in The Hindu survey of Indian Industry 1997, p. 217. The questions be raised against such an argument are: a) Did Italy and Japan go for produ patents only after their pharma companies had acquired the strength to tal on foreign competitions?; b) How has the increase in foreign investment China and Brazil helped or hindered their domestic companies?

[41] There are counter-arguments made to the effect, "that (it is a myth tha IPR will drive Indian companies out of business. This is far from the trut None of the drugs presently in the Indian market, or any that have bee patented prior to January 1995 anywhere in the world can be patented India. About 90% of existing drugs would have been off patent in the existi patent regime. The average time for a new chemical entity's discovery market introduction is 12 years. It is therefore, unlikely that these drugs wou reach the market in the TRIPS transition period. Japanese and Itali experience confirm that local companies flourish after IPR implementation But the point is what will happen after the transition period when new dru with new patents come in. The author does not mention whether the loc companies in China and Brazil flourished after the IPR regimes were in plac See D. Bhadury, "New vistas open up", in The Hindu survey of Indian Indust 1997, p. 215.

Taking a different perspective, Y. K. Hamied, chairman and MD Cipla, says, "India is not at a stage of development to provide for pate monopolies. The proposed amendments will take us back to the 196(when cost of medicines was the highest in the world. Product patents will r benefit anyone except the MNCs". Interview of Y K Hamied in Capi Market, January 11-24, 1999, p. 6-7.

[42] The world pharmaceutical industry's turnover at about $260 billions nearly 80 times larger than India's. Special Correspondent, "Gearing up t the 21st century", The Hindu Survey of Indian Industry 1997, p. 223.

[43] Sleeping sickness is perhaps the most vivid example of the disconnecti between the world's pharmaceutical giants and the fatal or debilitating disea of the Third World's poor. The last truly new drug for tuberculosis, wh kills two million people a year, was invented over 30 years ago. Accord

a U.S.- based marketing research firm that studies the industry, Africa counts for 1 percent of world drug sales, while N. America, Japan and estern Europe account for 80 percent. It is for them that companies invent tream of high-priced, highly profitable drugs. According to a study led by . Pecoul, of the 1,233 new medicines patented between 1975 and 1997, ly 13 – 1 per cent – were for tropic diseases. See Donald G. McNeil Jr., he Medicine Merchants: Drug Companies and the Third World" in The ontline, June 23, 2000.

The people of Sub-Saharan Africa and India together bore more than 4/ ths of the total global burden of diseases in 1990, although they make up % of the world's population. D. Bhadury, "New vistas open up", in The ndu survey of Indian Industry 1997, p. 215.

D. B. Gupta, "Global Opportunities Beckon", in The Hindu Survey of lian Industry, 1997, p. 220. Gupta also suggests the shifting from an export ented activity to a global marketing mode. This involves two activities: a) tablishing strategic marketing alliances in developed markets that will ovide access to distribution networks and enable Indian pharma companies operate as profit sharing partners & b) Concurrently, adopting vertical egration in a planned manner into the distribution and use chain, starting m developing markets and moving up to developed markets.

P. Ramanujam states that major R&D based companies will have to enter o collaborative research programme with the National Laboratories. This ll reduce the cost of R&D besides sharing of technical expertise and ortening the period of drug discovery or product development. The course new drug discovery can be classified into three phases: 1) pre-clinical; 2) nical development and 3) NDA approval. It has been abundantly clear t the clinical phase accounts for 30-50% of the total expenditure in new g development. Indian R&D can probably concentrate on the pre-clinical ase and join hands with TNCs for clinical development. Another important ect of clinical trials is the quality of studies. The stringent requirement of A/MCA will have to be met for final product approval and international mpanies, which have been consistently facing these requirements, may be a better shape to satisfy them than start-up Indian companies in drug covery. Also majority of products of some TNCs are actually licensed m much smaller companies. See his "The Millenium Angst", in The Hindu rvey of Indian Industry, 1999, p. 272.

The Indian pharma industry's penetration of the developed generic markets, ticularly in the US, Europe and Japan has been insignificant because

breakdowns in the supply and quality chains have not earned the India industry the status of a reliable quality supplier. As it stands, these thre markets alone constitute around 80% of global sales, and without penetratin these markets, success cannot be high. D. B. Gupta, "Global Opportunitie Beckon", in The Hindu Survey of Indian Industry, 1997, p. 220.

[48] R Ramachandran, "Challenging the basmati patent", Frontline, May 26 2000, p. 79-82. See also M. D. Nair, "Patenting rationale and status o Neem, in The Hindu, May 17, 2000. Nair states that, "At last count, ove 60 patents have been issued primarily by the US, European and Indian Pate Offices".

[49] Without the consent of local people, this knowledge has been used t develop highly profitable drugs. In any other situation this would be calle industrial espionage — theft of both the genetic materials and the long-acquire knowledge of using them to develop medicines. Though sometimes th royalties are as low as 0.1% and as high as 3-4%. See UN Developmer Report, 1999. Vandana Shiva claims that "more than 7,000 natural chemica compounds used in modern medicines and chemical industries have bee employed by indigenous healers and other people for centuries", in Vandan Shiva, et al, The Enclosure and the recovery of commons (Researc Foundation for Science, Technology and Ecology, New Delhi, 1997), p. 3

[50] Given the new realities of product patents, the business of bio-prospectin has begun to take off. From Australia and Ecuador to Thailand and Ugand bio-prospectors have made agreements with local communities, taking o patents based on local knowledge in exchange for a share of profits. Royalti promised are commonly 1-2%. Merck Pharmaceuticals, a TNC, has a agreement with the non-profit National Institute of Biodiversity, INBio, Costa Rica to pay $1.1 million for access to 10,000 plant and insect sample If any of this leads to a successful drug, Costa Rica would receive a 2-3 royalty share, yielding a possible $20-30 million each year But this rate low because negotiations are on an uneven footing. When one compar wanted to bioprospect in Yellowstore National Park, the United States Pa Service secured a 10% royalty share. Negotiating power is everything. U Development Report, 1999.

[51] India apparently has over 45,000 plant and 75,000 animal species.

[52] "The US, the prime mover of the linkage between trade and environme and trade and labour is the sole country which refuses to ratify the Conventi

on Biodiversity (CBD). See Suman Sahai, "Agenda for Seattle", Economic and Political Weekly, November 20, 1999, p. 3263.

[53] Suman Sahai suggests that following aspects ought to be kept in mind with respect to the Indian BD Bill: a) the list of exceptions to patentability in Article 27.3(b) of IPR(WTO) must include the list of essential drugs listed by the WHO and also drugs and products derived from the Indian systems of medicine. This exception has been made in the recent Patent Amendment Act (of India) & b) while amending Article 27.3 (b) with respect to the knowledge of indigenous and local communities, we need to put in that for us indigenous knowledge includes oral knowledge. This is important because US law recognises only written information when admitting proof if prior art in challenges to patents. Very often, knowledge with communities is only recorded in the tradition that communities carry and pass on orally through generations. See Suman Sahai, "Agenda for Seattle", Economic and Political Weekly, November 20, 1999.

[54] Briefly, it needs mentioning that another response to the issue of protecting Indian bio-diversity has come from some scholars like Vandana Shiva arguing for explicit recognition of traditional knowledge and systems of ownership. They make arguments for community based Intellectual Property Rights (CIP). I think the debate is complex and will generate a lot more interest once particular issues rise to the surface. See Vandana Shiva, et al, The Enclosure and the Recovery of Commons (Research Foundation for Science, Technology and Ecology, New Delhi, 1997).

[55] See Ashish Kothari, "Countering biological piracy", in The Hindu, June 23, 2000. Also see M . D. Nair, "Indian R & D merits fair deal", The Hindu, June 29, 2000, p. 25. Some apparent problems in the Bill are that, a) it omits from its purview all claims of IPRs made under the proposed Protection of Plant Varieties and Farmer's Rights Bill. The Plant Varieties Bill does not provide for prior consent from farmers or compulsorily benefit-sharing arrangements where farmers' varieties and knowledge are used.

[56] India's share of the trade benefits coming out of Uruguay Round is expected to be around 2 to 3 % of total benefits. Such benefits could however get completely wiped out with the payment on royalties.

[57] Under one of the WTO agreements, Article III Sect (5), it is required that signatory countries work with the IMF and the World Bank in order to achieve "greater coherence in the global economic policy making".

Some Interesting Global Statistics

By the late 1990s while the fifth of the world's people living in the highest-income countries had:

- 86% of world GDP - the bottom fifth just 1%.
- 82% of world export markets - the bottom fifth just 1%.
- 68% of FDI - the bottom fifth just 1%.
- 74% of world telephone lines, today's basic means of communication ê©ê©the bottom fifth just 1.5%.

358 people on the globe own as much wealth as half the world's population.

By 2000, out of 6 billion people, 1.5 billion will be living in poverty with over one billion earning less than a dollar a day.

The combined sales of the top 200 corporations amount to $7.1 trillion which is greater than the combined economies of 182 countries.

The controlling interests of the top 10 corporations of the global market in 1998 was: in commercial seed, 32% of a $23 billion industry; in pharmaceuticals, 35% of $297 billion; in veterinary medicine, 60% of $17 billion; in computers, almost 70% of $334 billion; in pesticides, 85% of $31 billion; and in telecommunications, more than 86% of $262 billion.

In 1997 foreign direct investment zoomed to $400 billion, seven times the level of the 1970s, but 58% of it went to industrial countries, 37% to developing countries and just 5% to the transition economies of Eastern Europe and the CIS.

More than 80% of the foreign direct investment in developing and transition economies in the 1990s has gone to just 20 countries, China getting the lion's share.

Since the mid-1980s, the 3rd world has been transferring interests/payments amounting to Rs.10,000 crore ($ 40 billion) per year.

The debt of U.S (1990) was more than $ 800 billion, making it the largest debtor nation in the world, owing more to other nations than all the developing countries combined.

Price Rs. 10/-